

WHAT IS CLAIMED IS:

1 1. A transgenic, non-human mammal in which the suppression of expression of
2 an endogenous LKB1 gene can be induced.

1 2. The transgenic, non-human mammal of claim 1, wherein the suppression of
2 expression of the endogenous LKB1 gene is induced by deleting at least a part of the LKB1
3 gene or a regulatory region thereof.

1 3. The transgenic, non-human mammal of claim 1, wherein at least a part of the
2 LKB1 gene or a regulatory region thereof in the genome of the transgenic mammal is
3 inserted between a pair of loxP sequences.

1 4. The transgenic non-human mammal of claim 1, wherein the mammal is a
2 rodent.

1 5. The transgenic non-human mammal of claim 2, wherein the mammal is a
2 rodent.

1 6. The transgenic non-human mammal of claim 3, wherein the mammal is a
2 rodent.

1 7. The transgenic non-human mammal of claim 4, wherein the rodent is a mouse.

1 8. The transgenic non-human mammal of claim 5, wherein the rodent is a mouse.

1 9. The transgenic non-human mammal of claim 6, wherein the rodent is a mouse.

1 10. A transgenic, non-human mammal wherein the expression of an endogenous
2 LKB1 gene is inducibly suppressed.

1 11. The transgenic, non-human mammal of claim 10, wherein the expression of
2 the endogenous LKB1 gene is suppressed by a defect in at least a part of the LKB1 gene or a
3 regulatory region thereof.

1 12. The transgenic, non-human mammal of claim 10, wherein the mammal is a
2 rodent.

1 13. The transgenic, non-human mammal of claim 11, wherein the mammal is a
2 rodent.

1 14. The transgenic, non-human mammal of claim 12, wherein the rodent is a
2 mouse.

1 15. The transgenic, non-human mammal of claim 13, wherein the rodent is a
2 mouse.

1 16. A transgenic, non-human mammalian cell, in which suppression of the
2 expression of an LKB1 gene can be induced and wherein the cell can be differentiated into an
3 individual mammal.

1 17. The cell of claim 16, wherein suppression of the expression of the LKB1
2 gene is induced by deleting at least a part of the LKB1 gene or a regulatory region thereof.

1 18. The cell of claim 16, wherein at least a part of the LKB1 gene or a regulatory
2 region thereof in the genome of the cell is inserted between a pair of loxP sequences.

1 19. The cell of claim 17, wherein at least a part of the LKB1 gene or a regulatory
2 region thereof in the genome of the cell is inserted between a pair of loxP sequences.

1 20. The cell of claim 18, wherein the cell comprises a Cre gene operably linked to
2 a nucleotide sequence that directs expression of the Cre gene.

1 21. The cell of claim 19, wherein the cell comprises a Cre gene operably linked to
2 a nucleotide sequence that directs expression of the Cre gene.

1 22. The cell of claim 16, wherein the cell is a rodent cell.

1 23. The cell of claim 18, wherein the cell is a rodent cell.

- 1 24. The cell of claim 20, wherein the cell is a rodent cell.
- 1 25. The cell of claim 22, wherein the cell is a mouse cell.
- 1 26. The cell of claim 23, wherein the cell is a mouse cell.
- 1 27. The cell of claim 24, wherein the cell is a mouse cell.
- 1 28. The cell of claim 16, wherein the cell is an embryonic stem cell.
- 1 29. The cell of claim 17, wherein the cell is an embryonic stem cell.
- 1 30. The cell of claim 18, wherein the cell is an embryonic stem cell.
- 1 31. The cell of claim 20, wherein the cell is an embryonic stem cell.
- 1 32. The cell of claim 22, wherein the cell is an embryonic stem cell.
- 1 33. The cell of claim 25, wherein the cell is an embryonic stem cell.
- 1 34. A transgenic, non-human mammalian cell, in which the expression of an
2 LKB1 gene is inducibly suppressed and wherein the cell can be differentiated into an
3 individual mammal.
- 1 35. The cell of claim 34, wherein the expression of the LKB1 gene is suppressed
2 by a defect in at least a part of the LKB1 gene or a regulatory region thereof.
- 1 36. The cell of claim 16, wherein at least a part of the LKB1 gene or a regulatory
2 region thereof in the genome of the cell is inserted between a pair of loxP sequences.
- 1 37. A transgenic, non-human mammalian cell, produced by the process of
2 expressing a Cre gene in the cell of claim 18.
- 1 38. The cell of claim 34, wherein the cell is a rodent cell.
- 1 39. The cell of claim 35, wherein the cell is a rodent cell.

- 1 40. The cell of claim 36, wherein the cell is a rodent cell.
- 1 41. The cell of claim 37, wherein the cell is a rodent cell.
- 1 42. The cell of claim 38, wherein the rodent cell is a mouse cell.
- 1 43. The cell of claim 39, wherein the rodent cell is a mouse cell.
- 1 44. The cell of claim 40, wherein the rodent cell is a mouse cell.
- 1 45. The cell of claim 41, wherein the rodent cell is a mouse cell.
- 1 46. The cell of claim 34, wherein the cell is an embryonic stem cell.
- 1 47. The cell of claim 35, wherein the cell is an embryonic stem cell.
- 1 48. The cell of claim 36, wherein the cell is an embryonic stem cell.
- 1 49. The cell of claim 37, wherein the cell is an embryonic stem cell.
- 1 50. A method for creating a non-human mammal, comprising the following steps:
2 (a) introducing the non-human mammalian cell of claim 28 into an
3 embryo obtained from a pregnant non-human female; and
4 (b) transplanting the embryo into the uterus of a non-human
5 pseudopregnant female.
- 1 51. A method for creating a non-human mammal, comprising the following steps:
2 (a) introducing the non-human mammalian cell of claim 46 into an
3 embryo obtained from a non-human pregnant female; and
4 (b) transplanting the embryo into the uterus of a non-human
5 pseudopregnant female.

1 52. A method for creating a non-human mammal, comprising the following steps:
2 (a) providing a fertilized egg or embryo from the non-human mammal of
3 claim 3;
4 (b) introducing the Cre gene into the fertilized egg or embryo;
5 (c) expressing the Cre gene in the fertilized egg or embryo; and
6 (d) transplanting the fertilized egg or embryo into the uterus of a non-
7 human pseudopregnant female.

1 53. A method for creating a non-human mammal, comprising the steps of:
2 introducing a Cre gene into the non-human mammal of claim 3; and expressing the Cre gene.

1 54. A method for creating a non-human mammal, comprising the steps of: mating
2 the non-human mammal of claim 3 with a non-human mammal containing a Cre gene in its
3 genome; and obtaining their offspring.